

<b>SOLICITATION/CONTRACT/ORDER FOR COMMERCIAL ITEMS</b> <b>OFFEROR TO COMPLETE BLOCKS 12, 17, 23, 24, &amp; 30</b>				1. REQUISITION NUMBER <b>PR-CI-04-10298</b>		PAGE 1 OF	
2. CONTRACT NO.		3. AWARD/EFFECTIVE DATE		4. ORDER NUMBER		5. SOLICITATION NUMBER <b>PR-CI-04-10298</b>	
7. FOR SOLICITATION INFORMATION CALL:		a. NAME <b>TAMMY ADAMS</b>		b. TELEPHONE NUMBER <i>(No collect calls)</i> <b>(513) 487-2030</b>		8. OFFER DUE DATE/LOCAL TIME <b>3/4/04 1:00 PM</b>	
9. ISSUED BY <b>Environmental Protection Agency Cincinnati Procurement Operations Division 26 W. Martin Luther King Drive Cincinnati, OH 45268</b>				10. THIS ACQUISITION IS <input checked="" type="checkbox"/> UNRESTRICTED  <input type="checkbox"/> SET ASIDE: <input type="checkbox"/> SMALL BUSINESS % FOR <input type="checkbox"/> SMALL DISADV. BUSINESS <input type="checkbox"/> 8(A)  NAICS: <b>334519</b> SIZE STANDARD: <b>500</b>		11. DELIVERY FOR FOB DESTINATION UNLESS BLOCK IS MARKED <input type="checkbox"/> SEE SCHEDULE  13a. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700)  13b. RATING  14. METHOD OF SOLICITATION <input type="checkbox"/> RFQ <input type="checkbox"/> IFB <input checked="" type="checkbox"/> RFP	
15. DELIVER TO				16. ADMINISTERED BY			
17a. CONTRACTOR/OFFEROR				18a. PAYMENT WILL BE MADE BY <b>Environmental Protection Agency Research Triangle Park Financial Management Center (D143-02) Research Triangle Park, NC 27711</b>			
TELEPHONE NO.				18b. SUBMIT INVOICES TO ADDRESS SHOWN IN BLOCK 18a. UNLESS BLOCK BELOW IS CHECKED <input type="checkbox"/> SEE ADDENDUM			
<input type="checkbox"/> 17b. CHECK IF REMITTANCE IS DIFFERENT AND PUT SUCH ADDRESS IN OFFER							
19. ITEM NO.	20. SCHEDULE OF SUPPLIES/SERVICES			21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT
	<b>SEE ATTACHED DOCUMENTS</b>  <i>(Attach Additional sheets as Necessary)</i>						
25. ACCOUNTING AND APPROPRIATION DATA <b>N/A</b>						26. TOTAL AWARD AMOUNT <i>(For Govt. Use Only)</i>	
<input type="checkbox"/> 27a. SOLICITATION INCORPORATES BY REFERENCE FAR 52.212-1, 52.212-4. FAR 52.212-3 AND 52.212-5 ARE ATTACHED.						<input type="checkbox"/> ARE <input type="checkbox"/> ARE NOT ATTACHED.	
<input type="checkbox"/> 27b. CONTRACT/PURCHASE ORDER INCORPORATES BY REFERENCE FAR 52.212-4. FAR 52.212-5 IS ATTACHED. ADDENDA						<input type="checkbox"/> ARE <input type="checkbox"/> ARE NOT ATTACHED.	
28. CONTRACTOR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN COPIES TO ISSUING OFFICE. CONTRACTOR AGREES TO FURNISH AND DELIVER ALL ITEMS SET FORTH OR OTHERWISE IDENTIFIED ABOVE AND ON ANY ADDITIONAL SHEETS SUBJECT TO THE TERMS AND CONDITIONS SPECIFIED HEREIN.				29. AWARD OF CONTRACT: REFERENCE _____ OFFER <input type="checkbox"/> DATED _____, YOUR OFFER ON SOLICITATION (BLOCK 5), INCLUDING ANY ADDITIONS OR CHANGES WHICH ARE SET FORTH HEREIN, IS ACCEPTED AS TO ITEMS:			
30a. SIGNATURE OF OFFEROR/CONTRACTOR				31a. UNITED STATES OF AMERICA <i>(SIGNATURE OF CONTRACTING OFFICER)</i>			
30b. NAME AND TITLE OF SIGNER <i>(TYPE OR PRINT)</i>		30c. DATE SIGNED		31b. NAME OF CONTRACTING OFFICER <i>(TYPE OR PRINT)</i>		31c. DATE SIGNED	
				<b>DAVID H. PLAGGE</b>			
32a. QUANTITY IN COLUMN 21 HAS BEEN  <input type="checkbox"/> RECEIVED <input type="checkbox"/> INSPECTED <input type="checkbox"/> ACCEPTED AND CONFORMS TO THE CONTRACT, EXCEPT AS NOTED				33. SHIP NUMBER  <input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL		34. VOUCHER NUMBER	
32b. SIGNATURE OF AUTHORIZED GOVT. REPRESENTATIVE				36. PAYMENT <input type="checkbox"/> COMPLETE <input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL		35. AMOUNT VERIFIED CORRECT FOR	
32c. DATE				38. S/R ACCOUNT NUMBER		37. CHECK NUMBER	
41a. I CERTIFY THIS ACCOUNT IS CORRECT AND PROPER FOR PAYMENT				39. S/R VOUCHER NUMBER		40. PAID BY	
41b. SIGNATURE AND TITLE OF CERTIFYING OFFICER				42a. RECEIVED BY <i>(Print)</i>			
41c. DATE				42b. RECEIVED AT <i>(Location)</i>			
				42c. DATE RECD <i>(YY/MM/DD)</i>		42d. TOTAL CONTAINERS	

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BURDEN STATEMENTSTANDARD FORM 1449 (10-95)  
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## TABLE OF CONTENTS

1.	CONTRACT TERMS AND CONDITIONS -- COMMERCIAL ITEMS (FAR 52.212-4) (OCT 2003)	Page 4
2.	CONTRACT TERMS AND CONDITIONS REQUIRED TO IMPLEMENT STATUTES OR EXECUTIVE ORDERS -- COMMERCIAL ITEMS (FAR 52.212-5) (JAN 2004)	Page 9
3.	INSTRUCTIONS TO OFFERORS -- COMMERCIAL ITEMS (FAR 52.212-1) (JAN 2004)	Page 14
4.	EVALUATION -- COMMERCIAL ITEMS (FAR 52.212-2) (JAN 1999)	Page 19
5.	OFFEROR REPRESENTATIONS AND CERTIFICATIONS -- COMMERCIAL ITEMS (FAR 52.212-3) (JAN 2004)	Page 20
	ADDENDUM TO FAR CLAUSE 52.212-4	Page 1-1
1.	EVALUATION OF OPTIONS (FAR 52.217-5) (JUL 1990)	Page 1-2
2.	COMPLIANCE WITH EPA POLICIES FOR INFORMATION RESOURCES MANAGEMENT (EPAAR 1552.211-79) (OCT 2000)	Page 1-2
3.	TECHNICAL QUESTIONS (EP 52.215-110) (APR 1984)	Page 1-3
4.	OPTION FOR INCREASED QUANTITY--FIXED-PRICE CONTRACT (EP 52.217-982) (APR 1984)	Page 1-3
5.	CONTRACT ADMINISTRATION REPRESENTATIVES (EP 52.242-100) (AUG 1984)	Page 1-4
	STATEMENT OF WORK	Page 2-1
	TECHNICAL EVALUATION CRITERIA	Page 3-1
	TECHNICAL PROPOSAL INSTRUCTIONS	Page 4-1

**1. CONTRACT TERMS AND CONDITIONS -- COMMERCIAL ITEMS (FAR 52.212-4) (OCT 2003)**

(a) *Inspection/Acceptance.* The Contractor shall only tender for acceptance those items that conform to the requirements of this contract. The Government reserves the right to inspect or test any supplies or services that have been tendered for acceptance. The Government may require repair or replacement of nonconforming supplies or reperformance of nonconforming services at no increase in contract price. The Government must exercise its post-acceptance rights --

(1) Within a reasonable time after the defect was discovered or should have been discovered; and

(2) Before any substantial change occurs in the condition of the item, unless the change is due to the defect in the item.

(b) *Assignment.* The Contractor or its assignee may assign its rights to receive payment due as a result of performance of this contract to a bank, trust company, or other financing institution, including any Federal lending agency in accordance with the Assignment of Claims Act (31 U.S.C.3727). However, when a third party makes payment (e.g., use of the Governmentwide commercial purchase card), the Contractor may not assign its rights to receive payment under this contract.

(c) *Changes.* Changes in the terms and conditions of this contract may be made only by written agreement of the parties.

(d) *Disputes.* This contract is subject to the Contract Disputes Act of 1978, as amended (41 U.S.C. 601-613). Failure of the parties to this contract to reach agreement on any request for equitable adjustment, claim, appeal or action arising under or relating to this contract shall be a dispute to be resolved in accordance with the clause at FAR 52.233-1, Disputes, which is incorporated herein by reference. The Contractor shall proceed diligently with performance of this contract, pending final resolution of any dispute arising under the contract.

(e) *Definitions.* The clause at FAR 52.202-1, Definitions, is incorporated herein by reference.

(f) *Excusable delays.* The Contractor shall be liable for default unless nonperformance is caused by an occurrence beyond the reasonable control of the Contractor and without its fault or negligence such as, acts of God or the public enemy, acts of the Government in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, unusually severe weather, and delays of common carriers. The Contractor shall notify the Contracting Officer in writing as soon as it is reasonably possible after the commencement of any excusable delay, setting forth the full particulars in connection therewith, shall remedy such occurrence with all reasonable dispatch, and shall promptly give written notice to the Contracting Officer of the cessation of such occurrence.

(g) *Invoice.* (1) The Contractor shall submit an original invoice and three copies (or electronic invoice, if authorized) to the address designated in the contract to receive invoices. An invoice must include--

(i) Name and address of the Contractor;

(ii) Invoice date and number;

(iii) Contract number, contract line item number and, if applicable, the order number;

(iv) Description, quantity, unit of measure, unit price and extended price of the items delivered;

(v) Shipping number and date of shipment, including the bill of lading number and weight of shipment if shipped on Government bill of lading;

(vi) Terms of any discount for prompt payment offered;

(vii) Name and address of official to whom payment is to be sent;

(viii) Name, title, and phone number of person to notify in event of defective invoice; and

(ix) Taxpayer Identification Number (TIN). The Contractor shall include its TIN on the invoice only if required elsewhere in this contract.

(x) Electronic funds transfer (EFT) banking information.

(A) The Contractor shall include EFT banking information on the invoice only if required elsewhere in this contract.

(B) If EFT banking information is not required to be on the invoice, in order for the invoice to be a proper invoice, the Contractor shall have submitted correct EFT banking information in accordance with the applicable solicitation provision, contract clause (e.g., 52.232-33, Payment by Electronic Funds Transfer--Central Contractor Registration, or 52.232-34, Payment by Electronic Funds Transfer--Other Than Central Contractor Registration), or applicable agency procedures.

(C) EFT banking information is not required if the Government waived the requirement to pay by EFT.

(2) Invoices will be handled in accordance with the Prompt Payment Act (31 U.S.C. 3903) and Office of Management and Budget (OMB) prompt payment regulations at 5 CFR part 1315.

(h) *Patent indemnity.* The Contractor shall indemnify the Government and its officers, employees and agents against liability, including costs, for actual or alleged direct or contributory infringement of, or inducement to infringe, any United States or foreign patent, trademark or copyright, arising out of the performance of this contract, provided the Contractor is reasonably notified of such claims and proceedings.

(i) *Payment.--(1) Items accepted.* Payment shall be made for items accepted by the Government that have been delivered to the delivery destinations set forth in this contract.

(2) *Prompt payment.* The Government will make payment in accordance with the Prompt Payment Act (31 U.S.C. 3903) and prompt payment regulations at 5 CFR part 1315.

(3) *Electronic Funds Transfer (EFT).* If the Government makes payment by EFT, see 52.212-5(b) for the appropriate EFT clause.

(4) *Discount.* In connection with any discount offered for early payment, time shall be computed from the date of the invoice. For the purpose of computing the discount earned, payment shall be considered to have been made

on the date which appears on the payment check or the specified payment date if an electronic funds transfer payment is made.

(5) *Overpayments.* If the Contractor becomes aware of a duplicate contract financing or invoice payment or that the Government has otherwise overpaid on a contract financing or invoice payment, the Contractor shall immediately notify the Contracting Officer and request instructions for disposition of the overpayment.

(j) *Risk of loss.* Unless the contract specifically provides otherwise, risk of loss or damage to the supplies provided under this contract shall remain with the Contractor until, and shall pass to the Government upon:

(1) Delivery of the supplies to a carrier, if transportation is f.o.b. origin; or

(2) Delivery of the supplies to the Government at the destination specified in the contract, if transportation is f.o.b. destination.

(k) *Taxes.* The contract price includes all applicable Federal, State, and local taxes and duties.

(l) *Termination for the Government's convenience.* The Government reserves the right to terminate this contract, or any part hereof, for its sole convenience. In the event of such termination, the Contractor shall immediately stop all work hereunder and shall immediately cause any and all of its suppliers and subcontractors to cease work. Subject to the terms of this contract, the Contractor shall be paid a percentage of the contract price reflecting the percentage of the work performed prior to the notice of termination, plus reasonable charges the Contractor can demonstrate to the satisfaction of the Government using its standard record keeping system, have resulted from the termination. The Contractor shall not be required to comply with the cost accounting standards or contract cost principles for this purpose. This paragraph does not give the Government any right to audit the Contractor's records. The Contractor shall not be paid for any work performed or costs incurred which reasonably could have been avoided.

(m) *Termination for cause.* The Government may terminate this contract, or any part hereof, for cause in the event of any default by the Contractor, or if the Contractor fails to comply with any contract terms and conditions, or fails to provide the Government, upon request, with adequate assurances of future performance. In the event of termination for cause, the Government shall not be liable to the Contractor for any amount for supplies or services not accepted, and the Contractor shall be liable to the Government for any and all rights and remedies provided by law. If it is determined that the Government improperly terminated this contract for default, such termination shall be deemed a termination for convenience.

(n) *Title.* Unless specified elsewhere in this contract, title to items furnished under this contract shall pass to the Government upon acceptance, regardless of when or where the Government takes physical possession.

(o) *Warranty.* The Contractor warrants and implies that the items delivered hereunder are merchantable and fit for use for the particular purpose described in this contract.

(p) *Limitation of liability.* Except as otherwise provided by an express warranty, the Contractor will not be liable to the Government for consequential damages resulting from any defect or deficiencies in accepted items.

(q) *Other compliances.* The Contractor shall comply with all applicable Federal, State and local laws, executive orders, rules and regulations applicable to its performance under this contract.

(r) *Compliance with laws unique to Government contracts.* The Contractor agrees to comply with 31 U.S.C. 1352 relating to limitations on the use of appropriated funds to influence certain Federal contracts; 18 U.S.C. 431 relating to officials not to benefit; 40 U.S.C. 327, et seq., Contract Work Hours and Safety Standards Act; 41 U.S.C. 51-58, Anti-Kickback Act of 1986; 41 U.S.C. 265 and 10 U.S.C. 2409 relating to whistleblower protections; 49 U.S.C. 40118, Fly American; and 41 U.S.C. 423 relating to procurement integrity.

(s) *Order of precedence.* Any inconsistencies in this solicitation or contract shall be resolved by giving precedence in the following order:

- (1) The schedule of supplies/services.
- (2) The Assignments, Disputes, Payments, Invoice, Other Compliances, and Compliance with Laws Unique to Government Contracts paragraphs of this clause.
- (3) The clause at 52.212-5.
- (4) Addenda to this solicitation or contract, including any license agreements for computer software.
- (5) Solicitation provisions if this is a solicitation.
- (6) Other paragraphs of this clause.
- (7) The Standard Form 1449.
- (8) Other documents, exhibits, and attachments.
- (9) The specification.

(t) *Central Contractor Registration (CCR).* (1) Unless exempted by an addendum to this contract, the Contractor is responsible during performance and through final payment of any contract for the accuracy and completeness of the data within the CCR database, and for any liability resulting from the Government's reliance on inaccurate or incomplete data. To remain registered in the CCR database after the initial registration, the Contractor is required to review and update on an annual basis from the date of initial registration or subsequent updates its information in the CCR database to ensure it is current, accurate and complete. Updating information in the CCR does not alter the terms and conditions of this contract and is not a substitute for a properly executed contractual document.

(2)(i) If a Contractor has legally changed its business name, "doing business as" name, or division name (whichever is shown on the contract), or has transferred the assets used in performing the contract, but has not completed the necessary requirements regarding novation and change-of-name agreements in FAR subpart 42.12, the Contractor shall provide the responsible Contracting Officer a minimum of one business day's written notification of its intention to (A) change the name in the CCR database; (B) comply with the requirements of subpart 42.12; and (C) agree in writing to the timeline and procedures specified by the responsible Contracting Officer. The Contractor must provide with the notification sufficient documentation to support the legally changed name.

(ii) If the Contractor fails to comply with the requirements of

paragraph (t)(2)(i) of this clause, or fails to perform the agreement at paragraph (t)(2)(i)(C) of this clause, and, in the absence of a properly executed novation or change-of-name agreement, the CCR information that shows the Contractor to be other than the Contractor indicated in the contract will be considered to be incorrect information within the meaning of the "Suspension of Payment" paragraph of the electronic funds transfer (EFT) clause of this contract.

(3) The Contractor shall not change the name or address for EFT payments or manual payments, as appropriate, in the CCR record to reflect an assignee for the purpose of assignment of claims (see Subpart 32.8, Assignment of Claims). Assignees shall be separately registered in the CCR database. Information provided to the Contractor's CCR record that indicates payments, including those made by EFT, to an ultimate recipient other than that Contractor will be considered to be incorrect information within the meaning of the "Suspension of payment" paragraph of the EFT clause of this contract.

(4) Offerors and Contractors may obtain information on registration and annual confirmation requirements via the internet at <http://www.ccr.gov> or by calling 1-888-227-2423 or 269-961-5757.

## **2. CONTRACT TERMS AND CONDITIONS REQUIRED TO IMPLEMENT STATUTES OR EXECUTIVE ORDERS -- COMMERCIAL ITEMS (FAR 52.212-5) (JAN 2004)**

(a) The Contractor shall comply with the following Federal Acquisition Regulation (FAR) clause, which is incorporated in this contract by reference, to implement provisions of law or Executive orders applicable to acquisitions of commercial items: 52.233-3, Protest after Award (AUG 1996) (31 U.S.C. 3553).

(b) The Contractor shall comply with the FAR clauses in this paragraph (b) that the Contracting Officer has indicated as being incorporated in this contract by reference to implement provisions of law or Executive orders applicable to acquisitions of commercial items:

*[Contracting Officer check as appropriate.]*

X(1) 52.203-6, Restrictions on Subcontractor Sales to the Government (JUL 1995), with Alternate I (OCT 1995) (41 U.S.C. 253g and 10 U.S.C. 2402).

\_\_\_(2) 52.219-3, Notice of Total HUBZone Set-Aside (JAN 1999) (15 U.S.C. 657a).

X(3) 52.219-4, Notice of Price Evaluation Preference for HUBZone Small Business Concerns (JAN 1999) (if the offeror elects to waive the preference, it shall so indicate in its offer) (15 U.S.C. 657a).

\_\_\_(4)(i) 52.219-5, Very Small Business Set-Aside (JUNE 2003) (Pub. L. 103-403, section 304, Small Business Reauthorization and Amendments Act of 1994).

\_\_\_(ii) Alternate I (MAR 1999) of 52.219-5.

\_\_\_(iii) Alternate II (JUNE 2003) of 52.219-5.

\_\_\_(5)(i) 52.219-6, Notice of Total Small Business Set-Aside (JUNE 2003) (15 U.S.C. 644).

\_\_\_(ii) Alternate I (OCT 1995) of 52.219-6.



\_\_\_(6)(i) 52.219-7, Notice of Partial Small Business Set-Aside (JUNE 2003) (15 U.S.C. 644).

\_\_\_(ii) Alternate I (OCT 1995) of 52.219-7.

X(7) 52.219-8, Utilization of Small Business Concerns (OCT 2000) (15 U.S.C. 637 (d)(2) and (3)).

\_\_\_(8)(i) 52.219-9, Small Business Subcontracting Plan (JAN 2002) (15 U.S.C. 637(d)(4)).

\_\_\_(ii) Alternate I (OCT 2001) of 52.219-9.

\_\_\_(iii) Alternate II (OCT 2001) of 52.219-9.

\_\_\_(9) 52.219-14, Limitations on Subcontracting (DEC 1996) (15 U.S.C. 637(a)(14)).

\_\_\_(10)(i) 52.219-23, Notice of Price Evaluation Adjustment for Small Disadvantaged Business Concerns (JUNE 2003) (Pub. L. 103-355, section 7102, and 10 U.S.C. 2323) (if the offeror elects to waive the adjustment, it shall so indicate in its offer).

\_\_\_(ii) Alternate I (JUNE 2003) of 52.219-23.

\_\_\_(11) 52.219-25, Small Disadvantaged Business Participation Program--Disadvantaged Status and Reporting (OCT 1999) (Pub.L. 103-355, section 7102, and 10 U.S.C. 2323).

\_\_\_(12) 52.219-26, Small Disadvantaged Business Participation Program--Incentive Subcontracting (OCT 2000) (Pub. L. 103-355, section 7102, and 10 U.S.C. 2323).

X(13) 52.222-3, Convict Labor (JUNE 2003) (E.O. 11755).

X(14) 52.222-19, Child Labor--Cooperation with Authorities and Remedies (Jan 2004) (E.O. 13126).

X(15) 52.222-21, Prohibition of Segregated Facilities (FEB 1999).

X(16) 52.222-26, Equal Opportunity (APR 2002) (E.O. 11246).

X(17) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (DEC 2001) (38 U.S.C. 4212).

X(18) 52.222-36, Affirmative Action for Workers with Disabilities (JUN 1998) (29 U.S.C. 793).

X(19) 52.222-37, Employment Reports on Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (DEC 2001) (38 U.S.C. 4212).

\_\_\_(20)(i) 52.223-9, Estimate of Percentage of Recovered Material Content for EPA-Designated Products (AUG 2000) (42 U.S.C. 6962(c)(3)(A)(ii)).

\_\_\_(ii) Alternate I (AUG 2000) of 52.223-9 (42 U.S.C. 6962(i)(2)(C)).

\_\_\_(21) 52.225-1, Buy American Act--Supplies (JUNE 2003) (41 U.S.C. 10a-10d).

\_\_(22)(i) 52.225-3, Buy American Act--Free Trade Agreements--Israeli Trade Act (Jan 2004) (41 U.S.C. 10a-10d, 19 U.S.C. 3301 note, 19 U.S.C. 2112 note, Pub. L. 108-77, 108-78).

\_\_ (ii) Alternate I (Jan 2004) of 52.225-3.

\_\_ (iii) Alternate II (Jan 2004) of 52.225-3.

X(23) 52.225-5, Trade Agreements (Jan 2004) (19 U.S.C. 2501, et seq., 19 U.S.C. 3301 note).

X(24) 52.225-13, Restrictions on Certain Foreign Purchases (OCT 2003) (E.o.s proclamations, and statutes administered by the Office of Foreign Assets Control of the Department of the Treasury).

\_\_(25) 52.225-15, Sanctioned European Union Country End Products (FEB 2000) (E.O. 12849).

\_\_(26) 52.225-16, Sanctioned European Union Country Services (FEB 2000) (E.O. 12849).

X(27) 52.232-29, Terms for Financing of Purchases of Commercial Items (FEB 2002) (41 U.S.C. 255(f), 10 U.S.C. 2307(f)).

\_\_(28) 52.232-30, Installment Payments for Commercial Items (OCT 1995) (41 U.S.C. 255(f), 10 U.S.C. 2307(f)).

X(29) 52.232-33, Payment by Electronic Funds Transfer--Central Contractor Registration (OCT 2003) (31 U.S.C. 3332).

\_\_(30) 52.232-34, Payment by Electronic Funds Transfer--Other than Central Contractor Registration (MAY 1999) (31 U.S.C. 3332).

\_\_(31) 52.232-36, Payment by Third Party (MAY 1999) (31 U.S.C. 3332).

\_\_(32) 52.239-1, Privacy or Security Safeguards (AUG 1996) (5 U.S.C. 552a).

\_\_(33)(i) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (APR 2003) (46 U.S.C. Appx 1241 and 10 U.S.C. 2631).

\_\_(ii) Alternate I (APR 1984) of 52.247-64.

(c) The Contractor shall comply with the FAR clauses in this paragraph (c), applicable to commercial services, that the Contracting Officer has indicated as being incorporated in this contract by reference to implement provisions of law or Executive orders applicable to acquisitions of commercial items:

*[Contracting Officer check as appropriate.]*

\_\_(1) 52.222-41, Service Contract Act of 1965, as Amended (MAY 1989) (41 U.S.C. 351, et seq.).

\_\_(2) 52.222-42, Statement of Equivalent Rates for Federal Hires (MAY 1989) (29 U.S.C. 206 and 41 U.S.C. 351, et seq.).

\_\_(3) 52.222-43, Fair Labor Standards Act and Service Contract Act--Price Adjustment (Multiple Year and Option Contracts) (MAY 1989) (29 U.S.C. 206 and 41 U.S.C. 351, et seq.).

\_\_\_(4) 52.222-44, Fair Labor Standards Act and Service Contract Act--Price Adjustment (February 2002) (29 U.S.C. 206 and 41 U.S.C. 351, *et seq.*).

\_\_\_(5) 52.222-47, SCA Minimum Wages and Fringe Benefits Applicable to Successor Contract Pursuant to PreDecemberessor Contractor Collective Bargaining Agreements (CBA) (May 1989) (41 U.S.C. 351, *et seq.*).

(d) *Comptroller General Examination of Record.* The Contractor shall comply with the provisions of this paragraph (d) if this contract was awarded using other than sealed bid, is in excess of the simplified acquisition threshold, and does not contain the clause at 52.215-2, Audit and Records -- Negotiation.

(1) The Comptroller General of the United States, or an authorized representative of the Comptroller General, shall have access to and right to examine any of the Contractor's directly pertinent records involving transactions related to this contract.

(2) The Contractor shall make available at its offices at all reasonable times the records, materials, and other evidence for examination, audit, or reproduction, until 3 years after final payment under this contract or for any shorter period specified in FAR Subpart 4.7, Contractor Records Retention, of the other clauses of this contract. If this contract is completely or partially terminated, the records relating to the work terminated shall be made available for 3 years after any resulting final termination settlement. Records relating to appeals under the disputes clause or to litigation or the settlement of claims arising under or relating to this contract shall be made available until such appeals, litigation, or claims are finally resolved.

(3) As used in this clause, records include books, documents, accounting procedures and practices, and other data, regardless of type and regardless of form. This does not require the Contractor to create or maintain any record that the Contractor does not maintain in the ordinary course of business or pursuant to a provision of law.

(e)(1) Notwithstanding the requirements of the clauses in paragraphs (a), (b), (c), and (d) of this clause, the Contractor is not required to flow down any FAR clause, other than those in paragraphs (i) through (vi) of this paragraph in a subcontract for commercial items. Unless otherwise indicated below, the extent of the flow down shall be as required by the clause--

(i) 52.219-8, Utilization of Small Business Concerns (October 2000) (15 U.S.C. 637(d)(2) and (3)), in all subcontracts that offer further subcontracting opportunities. If the subcontract (except subcontracts to small business concerns) exceeds \$500,000 (\$1,000,000 for construction of any public facility), the subcontractor must include 52.219-8 in lower tier subcontracts that offer subcontracting opportunities.

(ii) 52.222-26, Equal Opportunity (April 2002) (E.O. 11246).

(iii) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (December 2001) (38 U.S.C. 4212).

(iv) 52.222-36, Affirmative Action for Workers with Disabilities (June 1998) (29 U.S.C. 793).

(v) 52.222-41, Service Contract Act of 1965, as Amended (May 1989), flow down required for all subcontracts subject to the Service Contract Act of 1965 (41 U.S.C. 351, *et seq.*).

(vi) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (April 2003) (46 U.S.C. Appx 1241 and 10 U.S.C. 2631). Flow down required in accordance with paragraph (d) of FAR clause 52.247-64.

(2) While not required, the contractor may include in its subcontracts for commercial items a minimal number of additional clauses necessary to satisfy its contractual obligations.

### 3. INSTRUCTIONS TO OFFERORS -- COMMERCIAL ITEMS (FAR 52.212-1) (JAN 2004)

(a) *North American Industry Classification System (NAICS) code and small business size standard.* The NAICS code and small business size standard for this acquisition appear in Block 10 of the solicitation cover sheet (SF 1449). However, the small business size standard for a concern which submits an offer in its own name, but which proposes to furnish an item which it did not itself manufacture, is 500 employees.

(b) *Submission of offers.* Submit signed and dated offers to the office specified in this solicitation at or before the exact time specified in this solicitation. Offers may be submitted on the SF 1449, letterhead stationery, or as otherwise specified in the solicitation. As a minimum, offers must show--

- (1) The solicitation number;
- (2) The time specified in the solicitation for receipt of offers;
- (3) The name, address, and telephone number of the offeror;
- (4) A technical description of the items being offered in sufficient detail to evaluate compliance with the requirements in the solicitation. This may include product literature, or other documents, if necessary;
- (5) Terms of any express warranty;
- (6) Price and any discount terms;
- (7) "Remit to" address, if different than mailing address;
- (8) A completed copy of the representations and certifications at FAR 52.212-3;
- (9) Acknowledgment of Solicitation Amendments;
- (10) Past performance information, when included as an evaluation factor, to include recent and relevant contracts for the same or similar items and other references (including contract numbers, points of contact with telephone numbers and other relevant information); and
- (11) If the offer is not submitted on the SF 1449, include a statement specifying the extent of agreement with all terms, conditions, and provisions included in the solicitation. Offers that fail to furnish required representations or information, or reject the terms and conditions of the solicitation may be excluded from consideration.

(c) *Period for acceptance of offers.* The offeror agrees to hold the prices in its offer firm for 30 calendar days from the date specified for receipt of offers, unless another time period is specified in an addendum to the solicitation.

(d) *Product samples.* When required by the solicitation, product samples shall be submitted at or prior to the time specified for receipt of offers. Unless otherwise specified in this solicitation, these samples shall be submitted at no expense to the Government, and returned at the sender's request and expense, unless they are destroyed during preaward testing.

(e) *Multiple offers.* Offerors are encouraged to submit multiple offers presenting alternative terms and conditions or commercial items for satisfying the requirements of this solicitation. Each offer submitted will be evaluated separately.

(f) *Late submissions, modifications, revisions, and withdrawals of offers.*  
 (1) Offerors are responsible for submitting offers, and any modifications, revisions, or withdrawals, so as to reach the Government office designated in the solicitation by the time specified in the solicitation. If no time is specified in the solicitation, the time for receipt is 4:30 p.m., local time, for the designated Government office on the date that offers or revisions are due.

(2)(i) Any offer, modification, revision, or withdrawal of an offer received at the Government office designated in the solicitation after the exact time specified for receipt of offers is ``late'' and will not be considered unless it is received before award is made, the Contracting Officer determines that accepting the late offer would not unduly delay the acquisition; and--

(A) If it was transmitted through an electronic commerce method authorized by the solicitation, it was received at the initial point of entry to the Government infrastructure not later than 5:00 p.m. one working day prior to the date specified for receipt of offers; or

(B) There is acceptable evidence to establish that it was received at the Government installation designated for receipt of offers and was under the Government's control prior to the time set for receipt of offers; or

(C) If this solicitation is a request for proposals, it was the only proposal received.

(ii) However, a late modification of an otherwise successful offer, that makes its terms more favorable to the Government, will be considered at any time it is received and may be accepted.

(3) Acceptable evidence to establish the time of receipt at the Government installation includes the time/date stamp of that installation on the offer wrapper, other documentary evidence of receipt maintained by the installation, or oral testimony or statements of Government personnel.

(4) If an emergency or unanticipated event interrupts normal Government processes so that offers cannot be received at the Government office designated for receipt of offers by the exact time specified in the solicitation, and urgent Government requirements preclude amendment of the solicitation or other notice of an extension of the closing date, the time specified for receipt of offers will be deemed to be extended to the same time of day specified in the solicitation on the first work day on which normal Government processes resume.

(5) Offers may be withdrawn by written notice received at any time before the exact time set for receipt of offers. Oral offers in response to oral solicitations may be withdrawn orally. If the solicitation authorizes

facsimile offers, offers may be withdrawn via facsimile received at any time before the exact time set for receipt of offers, subject to the conditions specified in the solicitation concerning facsimile offers. An offer may be withdrawn in person by an offeror or its authorized representative if, before the exact time set for receipt of offers, the identity of the person requesting withdrawal is established and the person signs a receipt for the offer.

(g) *Contract award (not applicable to Invitation for Bids).* The Government intends to evaluate offers and award a contract without discussions with offerors. Therefore, the offeror's initial offer should contain the offeror's best terms from a price and technical standpoint. However, the Government reserves the right to conduct discussions if later determined by the Contracting Officer to be necessary. The Government may reject any or all offers if such action is in the public interest; accept other than the lowest offer; and waive informalities and minor irregularities in offers received.

(h) *Multiple awards.* The Government may accept any item or group of items of an offer, unless the offeror qualifies the offer by specific limitations. Unless otherwise provided in the Schedule, offers may not be submitted for quantities less than those specified. The Government reserves the right to make an award on any item for a quantity less than the quantity offered, at the unit prices offered, unless the offeror specifies otherwise in the offer.

(i) *Availability of requirements documents cited in the solicitation.*  
 (1)(i) The GSA Index of Federal Specifications, Standards and Commercial Item Descriptions, FPMR Part 101-29, and copies of specifications, standards, and commercial item descriptions cited in this solicitation may be obtained for a fee by submitting a request to--

GSA Federal Supply Service Specifications Section,  
 Suite 8100,  
 470 East L'Enfant Plaza, SW, Washington, DC 20407,  
 Telephone (202) 619-8925,  
 Facsimile (202) 619-8978.

(ii) If the General Services Administration, Department of Agriculture, or Department of Veterans Affairs issued this solicitation, a single copy of specifications, standards, and commercial item descriptions cited in this solicitation may be obtained free of charge by submitting a request to the addressee in paragraph (i)(1)(i) of this provision. Additional copies will be issued for a fee.

(2) The DoD Index of Specifications and Standards (DoDISS) and documents listed in it may be obtained from the--

Department of Defense Single Stock Point (DoDSSP),  
 Building 4, Section D,  
 700 Robbins Avenue,  
 Philadelphia, PA 19111-5094,  
 Telephone (215) 697- 2667/2179,  
 Facsimile (215) 697-1462.

(i) Automatic distribution may be obtained on a subscription basis.

(ii) Order forms, pricing information, and customer support information may be obtained--

(A) By telephone at (215) 697-2667/2179; or

(B) Through the DoDSSP Internet site at <http://dodssp.daps.mil>.

(3) Nongovernment (voluntary) standards must be obtained from the organization responsible for their preparation, publication, or maintenance.

(j) *Data Universal Numbering System (DUNS) Number*. (Applies to all offers exceeding \$25,000, and offers of \$25,000 or less if the solicitation requires the Contractor to be registered in the Central Contractor Registration (CCR) database. The offeror shall enter, in the block with its name and address on the cover page of its offer, the annotation "DUNS" or "DUNS +4" followed by the DUNS or DUNS +4 number that identifies the offeror's name and address. The DUNS +4 is the DUNS number plus a 4-character suffix that may be assigned at the discretion of the offeror to establish additional CCR records for identifying alternative Electronic Funds Transfer (EFT) accounts (see FAR Subpart 32.11) for the same parent concern. If the offeror does not have a DUNS number, it should contact Dun and Bradstreet directly to obtain one. An offeror within the United States may contact Dun and Bradstreet by calling 1-866-705-5711 or via the internet at <http://www.dnb.com>. An offeror located outside the United States must contact the local Dun and Bradstreet office for a DUNS number.

(k) *Central Contractor Registration*. Unless exempted by an addendum to this solicitation, by submission of an offer, the offeror acknowledges the requirement that a prospective awardee shall be registered in the CCR database prior to award, during performance and through final payment of any contract resulting from this solicitation. If the Offeror does not become registered in the CCR database in the time prescribed by the Contracting Officer, the Contracting Officer will proceed to award to the next otherwise successful registered Offeror. Offerors may obtain information on registration and annual confirmation requirements via the Internet at <http://www.ccr.gov> or by calling 1-888-227-2423 or 269-961-5757.

(l) *Debriefing*. If a post-award debriefing is given to requesting offerors, the Government shall disclose the following information, if applicable:

(1) The agency's evaluation of the significant weak or deficient factors in the debriefed offeror's offer.

(2) The overall evaluated cost or price and technical rating of the successful and the debriefed offeror and past performance information on the debriefed offeror.

(3) The overall ranking of all offerors, when any ranking was developed by the agency during source selection.

(4) A summary of the rationale for award;

(5) For acquisitions of commercial items, the make and model of the item to be delivered by the successful offeror.

(6) Reasonable responses to relevant questions posed by the debriefed offeror as to whether source-selection procedures set forth in the solicitation, applicable regulations, and other applicable authorities were followed by the agency.

#### 4. EVALUATION -- COMMERCIAL ITEMS (FAR 52.212-2) (JAN 1999)

(a) The Government will award a contract resulting from this solicitation to

the responsible offeror whose offer conforming to the solicitation will be most advantageous to the Government, price and other factors considered. The following factors shall be used to evaluate offers:

**See Attachment 3, Technical Evaluation Criteria**

For this solicitation, an order will be placed with the offeror that represents the Best Value to the government. Price may not be the determining factor.

(b) *Options.* The Government will evaluate offers for award purposes by adding the total price for all options to the total price for the basic requirement. The Government may determine that an offer is unacceptable if the option prices are significantly unbalanced. Evaluation of options shall not obligate the Government to exercise the option(s).

(c) A written notice of award or acceptance of an offer, mailed or otherwise furnished to the successful offeror within the time for acceptance specified in the offer, shall result in a binding contract without further action by either party. Before the offer's specified expiration time, the Government may accept an offer (or part of an offer), whether or not there are negotiations after its receipt, unless a written notice of withdrawal is received before award.

**5. OFFEROR REPRESENTATIONS AND CERTIFICATIONS -- COMMERCIAL ITEMS (FAR 52.212-3) (JAN 2004)**

(a) *Definitions.* As used in this provision:

"Emerging small business" means a small business concern whose size is no greater than 50 percent of the numerical size standard for the NAICS code designated.

"Forced or indentured child labor" means all work or service-

(1) Exacted from any person under the age of 18 under the menace of any penalty for its nonperformance and for which the worker does not offer himself voluntarily; or

(2) Performed by any person under the age of 18 pursuant to a contract the enforcement of which can be accomplished by process of penalties.

"Service-disabled veteran-owned small business concern"-

(1) Means a small business concern-

(i) Not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and

(ii) The management and daily business operations of which are controlled by one or more service-disabled veterans or, in the case of a veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.



(2) Service-disabled veteran means a veteran, as defined in 38 U.S.C. 101(2), with a disability that is service-connected, as defined in 38 U.S.C. 101(16).

"Small business concern" means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR Part 121 and size standards in this solicitation.

"Veteran-owned small business concern" means a small business concern-

(1) Not less than 51 percent of which is owned by one or more veterans(as defined at 38 U.S.C. 101(2)) or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more veterans; and

(2) The management and daily business operations of which are controlled by one or more veterans.

"Women-owned business concern" means a concern which is at least 51 percent owned by one or more women; or in the case of any publicly owned business, at least 51 percent of the its stock is owned by one or more women; and whose management and daily business operations are controlled by one or more women.

"Women-owned small business concern" means a small business concern --

(1) That is at least 51 percent owned by one or more women or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and

(2) Whose management and daily business operations are controlled by one or more women.

(b) *Taxpayer identification number (TIN)* (26 U.S.C. 6109, 31 U.S.C. 7701). (Not applicable if the offeror is required to provide this information to a central contractor registration database to be eligible for award.)

(1) All offerors must submit the information required in paragraphs (b)(3) through (b)(5) of this provision to comply with debt collection requirements of 31 U.S.C. 7701(c) and 3325(d), reporting requirements of 26 U.S.C. 6041, 6041A, and 6050M, and implementing regulations issued by the Internal Revenue Service (IRS).

(2) The TIN may be used by the government to collect and report on any delinquent amounts arising out of the offeror's relationship with the Government (31 U.S.C. 7701(c)(3)). If the resulting contract is subject to the payment reporting requirements described in FAR 4.904, the TIN provided hereunder may be matched with IRS records to verify the accuracy of the offeror's TIN.]

(3) Taxpayer Identification Number (TIN).

[ ] TIN:\_\_\_\_\_.

[ ] TIN has been applied for.

[ ] TIN is not required because:

[ ] Offeror is a nonresident alien, foreign corporation, or foreign

partnership that does not have income effectively connected with the conduct of a trade or business in the United States and does not have an office or place of business or a fiscal paying agent in the United States;

☐ Offeror is an agency or instrumentality of a foreign government;

☐ Offeror is an agency or instrumentality of the Federal Government;

(4) Type of organization.

☐ Sole proprietorship;

☐ Partnership;

☐ Corporate entity (not tax-exempt);

☐ Corporate entity (tax-exempt);

☐ Government entity (Federal, State, or local);

☐ Foreign government;

☐ International organization per 26 CFR 1.6049-4;

☐ Other \_\_\_\_\_.

(5) Common parent.

☐ Offeror is not owned or controlled by a common parent:

☐ Name and TIN of common parent:

Name \_\_\_\_\_

TIN \_\_\_\_\_

(c) Offerors must complete the following representations when the resulting contract will be performed in the United States or its outlying areas. Check all that apply.

(1) *Small business concern.* The offeror represents as part of its offer that it ☐ is, ☐ is not a small business concern.

(2) *Veteran-owned small business concern.* [Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.] The offeror represents as part of its offer that it ☐ is, ☐ is not a veteran-owned small business concern.

(3) *Service-disabled veteran-owned small business concern.* [Complete only if the offeror represented itself as a veteran-owned small business concern in paragraph (c)(2) of this provision.] The offeror represents as part of its offer that it ☐ is, ☐ is not a service-disabled veteran-owned small business concern.

(4) *Small disadvantaged business concern.* [Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.] The offeror represents, for general statistical purposes, that it ☐ is, ☐ is not, a small disadvantaged business concern as defined in 13 CFR 124.1002.

(5) *Women-owned small business concern. [Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.]* The offeror represents that it ☐ is, ☐ is not a women-owned small business concern.

**Note:** Complete paragraphs (c)(6) and (c)(7) only if this solicitation is expected to exceed the simplified acquisition threshold.

(6) *Women-owned business concern (other than small business concern).* [Complete only if the offeror is a women-owned business concern and did not represent itself as a small business concern in paragraph (c)(1) of this provision.]. The offeror represents that it ☐ is, a women-owned business concern.

(7) *Tie bid priority for labor surplus area concerns.* If this is an invitation for bid, small business offerors may identify the labor surplus areas in which costs to be incurred on account of manufacturing or production (by offeror or first-tier subcontractors) amount to more than 50 percent of the contract price:

---

(8) *Small Business Size for the Small Business Competitiveness Demonstration Program and for the Targeted Industry Categories under the Small Business Competitiveness Demonstration Program. [Complete only if the offeror has represented itself to be a small business concern under the size standards for this solicitation.]*

(i) *[Complete only for solicitations indicated in an addendum as being set-aside for emerging small businesses in one of the four designated industry groups (DIGs).]* The offeror represents as part of its offer that it ☐ is, ☐ is not an emerging small business.

(ii) *[Complete only for solicitations indicated in an addendum as being for one of the targeted industry categories (TICs) or four designated industry groups (DIGs).]* Offeror represents as follows:

(A) Offeror's number of employees for the past 12 months (check the Employees column if size standard stated in the solicitation is expressed in terms of number of employees); or

(B) Offeror's average annual gross revenue for the last 3 fiscal years (check the Average Annual Gross Number of Revenues column if size standard stated in the solicitation is expressed in terms of annual receipts).

*(Check one of the following):*

<b>Number of Employees</b>	<b>Average Annual Gross Revenues</b>
<input type="checkbox"/> 50 or fewer	<input type="checkbox"/> \$1 million or less
<input type="checkbox"/> 51-100	<input type="checkbox"/> \$1,000,001-\$2 million
<input type="checkbox"/> 101-250	<input type="checkbox"/> \$2,000,001-\$3.5 million
<input type="checkbox"/> 251-500	<input type="checkbox"/> \$3,500,001-\$5 million
<input type="checkbox"/> 501-750	<input type="checkbox"/> \$5,000,001-\$10 million
<input type="checkbox"/> 751-1,000	<input type="checkbox"/> \$10,000,001-\$17 million
<input type="checkbox"/> Over 1,000	<input type="checkbox"/> Over \$17 million

(9) *[Complete only if the solicitation contains the clause at FAR 52.219-23, Notice of Price Evaluation Adjustment for Small Disadvantaged Business Concerns, or FAR 52.219-25, Small Disadvantaged Business]*

*Participation Program-Disadvantaged Status and Reporting, and the offeror desires a benefit based on its disadvantaged status.]*

(i) *General.* The offeror represents that either-

(A) It [ ] is, [ ] is not certified by the Small Business Administration as a small disadvantaged business concern and identified, on the date of this representation, as a certified small disadvantaged business concern in the database maintained by the Small Business Administration (PRO-Net), and that no material change in disadvantaged ownership and control has occurred since its certification, and, where the concern is owned by one or more individuals claiming disadvantaged status, the net worth of each individual upon whom the certification is based does not exceed \$750,000 after taking into account the applicable exclusions set forth at 13 CFR 124.104(c)(2); or

(B) It [ ] has, [ ] has not submitted a completed application to the Small Business Administration or a Private Certifier to be certified as a small disadvantaged business concern in accordance with 13 CFR 124, Subpart B, and a decision on that application is pending, and that no material change in disadvantaged ownership and control has occurred since its application was submitted.

(ii) [ ] *Joint Ventures under the Price Evaluation Adjustment for Small Disadvantaged Business Concerns.* The offeror represents, as part of its offer, that it is a joint venture that complies with the requirements in 13 CFR 124.1002(f) and that the representation in paragraph (c)(9)(i) of this provision is accurate for the small disadvantaged business concern that is participating in the joint venture. *[The offeror shall enter the name of the small disadvantaged business concern that is participating in the joint venture: \_\_\_\_\_.]*

(10) *HUBZone small business concern.* *[Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.]* The offeror represents, as part of its offer, that--

(i) It [ ] is, [ ] is not a HUBZone small business concern listed, on the date of this representation, on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration, and no material change in ownership and control, principal office, or HUBZone employee percentage has occurred since it was certified by the Small Business Administration in accordance with 13 CFR part 126; and

(ii) It [ ] is, [ ] is not a joint venture that complies with the requirements of 13 CFR part 126, and the representation in paragraph (c)(10)(i) of this provision is accurate for the HUBZone small business concern or concerns that are participating in the joint venture. *[The offeror shall enter the name or names of the HUBZone small business concern or concerns that are participating in the joint venture: \_\_\_\_\_.]* Each HUBZone small business concern participating in the joint venture shall submit a separate signed copy of the HUBZone representation.

(d) *Representations required to implement provisions of Executive Order 11246* --(1) Previous contracts and compliance. The offeror represents that --

(i) It [ ] has, [ ] has not, participated in a previous contract or subcontract subject to the Equal Opportunity clause of this solicitation; and

(ii) It [ ] has, [ ] has not, filed all required compliance reports.

(2) Affirmative Action Compliance. The offeror represents that --

(i) It [ ]has developed and has on file, [ ]has not developed and does not have on file, at each establishment, affirmative action programs required by rules and regulations of the Secretary of Labor (41 CFR parts 60-1 and 60-2), or

(ii) It [ ]has not previously had contracts subject to the written affirmative action programs requirement of the rules and regulations of the Secretary of Labor.

(e) *Certification Regarding Payments to Influence Federal Transactions* (31 U.S.C. 1352). (Applies only if the contract is expected to exceed \$100,000.) By submission of its offer, the offeror certifies to the best of its knowledge and belief that no Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress or an employee of a Member of Congress on his or her behalf in connection with the award of any resultant contract.

(f) *Buy American Act Certificate*. (Applies only if the clause at Federal Acquisition Regulation (FAR) 52.225-1, Buy American Act--Supplies, is included in this solicitation.)

(1) The offeror certifies that each end product, except those listed in paragraph (f)(2) of this provision, is a domestic end product and that the offeror has considered components of unknown origin to have been mined, produced, or manufactured outside the United States. The offeror shall list as foreign end products those end products manufactured in the United States that do not qualify as domestic end products. The terms "component," "domestic end product," "end product," "foreign end product," and "United States" are defined in the clause of this solicitation entitled "Buy American Act--Supplies."

(2) Foreign End Products:

LINE ITEM NO.	COUNTRY OF ORIGIN
_____	_____
_____	_____
_____	_____

[List as necessary]

(3) The Government will evaluate offers in accordance with the policies and procedures of FAR Part 25.

(g)(1) *Buy American Act - Free Trade Agreement -- Israeli Trade Act Certificate*. (Applies only if the clause at FAR 52.225-3, Buy American Act - Free Trade Agreement Israeli Trade Act, is included in this solicitation.)

(i) The offeror certifies that each end product, except those listed in paragraph (g)(1)(ii) or (g)(1)(iii) of this provision, is a domestic end product and that the offeror has considered components of unknown origin to have been mined, produced, or manufactured outside the United States. The terms "component," "domestic end product," "end product," "foreign end product," and "United States" are defined in the clause of this solicitation entitled "Buy American Act--Free Trade Agreement--Israeli Trade Act."

(ii) The offeror certifies that the following supplies are FTA country end products or Israeli end products as defined in the clause of this solicitation entitled "Buy American Act-Free Trade Agreement-Israeli Trade Act":

FTA Country or Israeli End Products:

LINE ITEM NO.	COUNTRY OF ORIGIN
_____	_____
_____	_____
_____	_____

*[List as necessary]*

(iii) The offeror shall list those supplies that are foreign end products (other than those listed in paragraph (g)(1)(ii) or this provision) as defined in the clause of this solicitation entitled "Buy American Act-Free Trade Agreement-Israeli Trade Act." The offeror shall list as other foreign end products those end products manufactured in the United States that do not qualify as domestic end products.

Other Foreign End Products:

LINE ITEM NO.	COUNTRY OF ORIGIN
_____	_____
_____	_____
_____	_____

*[List as necessary]*

(iv) The Government will evaluate offers in accordance with the policies and procedures of FAR Part 25.

(2) *Buy American Act--Free Trade Agreements--Israeli Trade Act Certificate, Alternate I (Jan 2004)*. If Alternate I to the clause at FAR 52.225-3 is included in this solicitation, substitute the following paragraph (g)(1)(ii) for paragraph (g)(1)(ii) of the basic provision:

(g)(1)(ii) The offeror certifies that the following supplies are Canadian end products as defined in the clause of this solicitation entitled "Buy American Act--Free Trade Agreement--Israeli Trade Act":

Canadian End Products:

Line Item No.

_____
_____
_____

*(List as necessary)*

(3) *Buy American Act--Free Trade Agreements--Israeli Trade Act Certificate, Alternate II (Jan 2004)*. If Alternate II to the clause at FAR

52.225-3 is included in this solicitation, substitute the following paragraph (g)(1)(ii) for paragraph (g)(1)(ii) of the basic provision:

(g)(1)(ii) The offeror certifies that the following supplies are Canadian end products or Israeli end products as defined in the clause of this solicitation entitled ``Buy American Act-- Free Trade Agreement-Israeli Trade Act'':

Canadian or Israeli End Products:

LINE ITEM NO.	COUNTRY OF ORIGIN
_____	_____
_____	_____
_____	_____

*[List as necessary]*

(4) *Trade Agreements Certificate.* (Applies only if the clause at FAR 52.225-5, Trade Agreements, is included in this solicitation.)

(i) The offeror certifies that each end product, except those listed in paragraph (g)(4)(ii) of this provision, is a U.S.-made, designated country, Caribbean Basin country, or FTA country end product, as defined in the clause of this solicitation entitled "Trade Agreements."

(ii) The offeror shall list as other end products those end products that are not U.S.-made, designated country, Caribbean Basin country, or FTA country end products.

Other End Products

LINE ITEM NO.	COUNTRY OF ORIGIN
_____	_____
_____	_____
_____	_____

*[List as necessary]*

(iii) The Government will evaluate offers in accordance with the policies and procedures of FAR Part 25. For line items subject to the Trade Agreements Act, the Government will evaluate offers of U.S.-made, designated country, Caribbean Basin country, or FTA country end products without regard to the restrictions of the Buy American Act. The Government will consider for award only offers of U.S.-made, designated country, Caribbean Basin country, or FTA country end products unless the Contracting Officer determines that there are no offers for such products or that the offers for such products are insufficient to fulfill the requirements of the solicitation.

(h) *Certification Regarding Debarment, Suspension or Ineligibility for Award (Executive Order 12549).* (Applies only if the contract value is expected to exceed the simplified acquisition threshold.) The offeror certifies, to the best of its knowledge and belief, that the offeror and/or any of its principals--

(1) [ ] Are, [ ] are not presently debarred, suspended, proposed for

debarment, or declared ineligible for the award of contracts by any Federal agency; and

(2) [ ] Have, [ ] have not, within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a Federal, state or local government contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property; and

(3) [ ] Are, [ ] are not presently indicted for, or otherwise criminally or civilly charged by a Government entity with, commission of any of these offenses.

(i) *Certification Regarding Knowledge of Child Labor for Listed End Products (Executive Order 13126).* [The Contracting Officer must list in paragraph (i)(1) any end products being acquired under this solicitation that are included in the List of Products Requiring Contractor Certification as to Forced or Indentured Child Labor, unless excluded at 22.1503(b).]

(1) *Listed End Product*

Listed End Product	Listed Countries of Origin:
_____	_____
_____	_____

(2) *Certification.* [If the Contracting Officer has identified end products and countries of origin in paragraph (i)(1) of this provision, then the offeror must certify to either (i)(2)(i) or (i)(2)(ii) by checking the appropriate block.]

[ ] (i) The offeror will not supply any end product listed in paragraph (i)(1) of this provision that was mined, produced, or manufactured in the corresponding country as listed for that product.

[ ] (ii) The offeror may supply an end product listed in paragraph (i)(1) of this provision that was mined, produced, or manufactured in the corresponding country as listed for that product. The offeror certifies that it has made a good faith effort to determine whether forced or indentured child labor was used to mine, produce, or manufacture any such end product furnished under this contract. On the basis of those efforts, the offeror certifies that it is not aware of any such use of child labor.



ATTACHMENT 1

ADDENDUM TO FAR CLAUSE 52.212-4

## 1. EVALUATION OF OPTIONS (FAR 52.217-5) (JUL 1990)

Except when it is determined in accordance with FAR 17.206(b) not to be in the Government's best interests, the Government will evaluate offers for award purposes by adding the total price for all options to the total price for the basic requirements. Evaluation of options will not obligate the Government to exercise the option(s).

## 2. COMPLIANCE WITH EPA POLICIES FOR INFORMATION RESOURCES MANAGEMENT (EPAAR 1552.211-79) (OCT 2000)

(a) Definition. Information Resources Management (IRM) is defined as any planning, budgeting, organizing, directing, training, promoting, controlling, and managing activities associated with the burden, collection, creation, use and dissemination of information. IRM includes both information itself, and the management of information and related resources such as personnel, equipment, funds, and technology. Examples of these services include but are not limited to the following:

(1) The acquisition, creation, or modification of a computer program or automated data base for delivery to EPA or use by EPA or contractors operating EPA programs.

(2) The analysis of requirements for, study of the feasibility of, evaluation of alternatives for, or design and development of a computer program or automated data base for use by EPA or contractors operating EPA programs.

(3) Services that provide EPA personnel access to or use of computer or word processing equipment, software, or related services.

(4) Services that provide EPA personnel access to or use of: Data communications; electronic messaging services or capabilities; electronic bulletin boards, or other forms of electronic information dissemination; electronic record-keeping; or any other automated information services.

(b) General. The Contractor shall perform any IRM related work under this contract in accordance with the IRM policies, standards and procedures set forth in this clause and noted below. Upon receipt of a work request (i.e. delivery order or work assignment), the Contractor shall check this listing of directives (see paragraph (d) for electronic access). The applicable directives for performance of the work request are those in effect on the date of issuance of the work request.

(1) IRM Policies, Standards and Procedures. The 2100 Series (2100-2199) of the Agency's Directive System contains the majority of the Agency's IRM policies, standards and procedures.

(2) Groundwater Program IRM Requirement. A contractor performing any work related to collecting Groundwater data; or developing or enhancing data bases containing Groundwater quality data shall comply with EPA Order 7500.1A - Minimum Set of Data Elements for Groundwater.

(3) EPA Computing and Telecommunications Services. The Enterprise Technology Services Division (ETSD) Operational Directives Manual contains procedural information about the operation of the Agency's computing and telecommunications services. Contractors performing work for the Agency's National Computer Center or those who are developing systems which will be operating on the Agency's national platforms must comply with procedures

established in the Manual. (This document may be found at:  
<http://basin.rtpnc.epa.gov:9876/etsd/directives.nsf/>.)

(c) Printed Documents. Documents listed in (b)(1) and (b)(2) may be obtained from:

U.S. Environmental Protection Agency  
 Office of Administration  
 Facilities Management and Services Division  
 Distribution Section  
 Mail Code: 3204  
 Ariel Rios Building  
 1200 Pennsylvania Avenue, N.W.  
 Washington, D.C. 20460  
 Phone: (202) 260-5797

(d) Electronic Access. Electronic access. A complete listing, including full text, of documents included in the 2100 Series of the Agency's Directive System is maintained on the EPA Public Access Server on the Internet at <http://epa.gov/docs/irmpoli8/>.

### 3. TECHNICAL QUESTIONS (EP 52.215-110) (APR 1984)

Offerors must submit all technical questions concerning this solicitation in writing to the contract specialist. EPA must receive the questions no later than 7 calendar days after the date of this solicitation. EPA will answer questions which may affect offers in an amendment to the solicitation. EPA will not reference the source of the questions.

### 4. OPTION FOR INCREASED QUANTITY--FIXED-PRICE CONTRACT (EP 52.217-982) (APR 1984)

(a) The Government may increase the quantity of work called for under this contract as follows:

Optional Item Number	Description	Optional Quantity Amounts	Unit Price	Extended Price	Delivery Date
0001	Option for a Jacket Water Coolant System that allows for operation of an engine that does not have a water pump in accordance with the attached SOW.	3	\$_____	\$_____	To be Determined
0002	Option for up to two additional Engine Jacket Water Cooling Systems in accordance with the attached SOW.	2	\$_____	\$_____	To be Determined

0003	Option for up to two additional Charge Air Cooling Systems in accordance with the attached SOW.	2	\$_____	\$_____	To be Determined
0004	Extended Warranty for 2 <sup>nd</sup> Year after Acceptance Date in accordance with the attached SOW.	1	\$_____	\$_____	To be Determined
0005	Extended Warranty for 3 <sup>rd</sup> Year after Acceptance Date in accordance with the attached SOW.	1	\$_____	\$_____	To be Determined
0006	Extended Warranty for 4 <sup>th</sup> Year after Acceptance Date in accordance with the attached SOW.	1	\$_____	\$_____	To be Determined
0007	Extended Warranty for 5 <sup>th</sup> Year after Acceptance Date in accordance with the attached SOW.	1	\$_____	\$_____	To be Determined

(b) The Government may exercise an option by written notice to the Contractor within the following time periods:

<u>Optional Item</u>	<u>Time Period for Exercising Option</u>
0001	Within 12 Months After Contract Award
0002	Within 12 Months After Contract Award
0003	Within 12 Months After Contract Award
0004	Within 30 Days of Expiration of Previous Warranty Period
0005	Within 30 Days of Expiration of Previous Warranty Period
0006	Within 30 Days of Expiration of Previous Warranty Period
0007	Within 30 Days of Expiration of Previous Warranty Period

**5. CONTRACT ADMINISTRATION REPRESENTATIVES (EP 52.242-100) (AUG 1984)**

Project Officer(s) for this contract:

Project Officer:

TO BE IDENTIFIED AT TIME OF CONTRACT AWARD

Contract Specialist(s) responsible for administering this contract:

Administrative Contracting Officer:

TO BE IDENTIFIED AT TIME OF CONTRACT AWARD

ATTACHMENT 2

STATEMENT OF WORK

## Statement of Work

# Engine Test Cell Coolant Conditioning Systems for EPA NVFEL

**Requirements, Functional Specifications,  
Performance Criteria, and Acceptance Tests**

U. S. Environmental Protection Agency  
National Vehicle and Fuel Emissions Laboratory  
2565 Plymouth Road  
Ann Arbor, Michigan 48105

## *Table of Contents*

<b>1.0</b>	<b>Overview and General Requirements</b>
1.1	References
1.2	Background and Procurement Overview
1.3	General Description of Test Site
1.4	Safety, Health, and Environmental Provisions
1.5	Electrical Requirements
1.6	Project Management and Schedule of Deliverables
<b>2.0</b>	<b>Technical Requirements for Engine Test Cell Coolant Conditioning Systems</b>
2.1	Temperature Conditioning System for Engine Jacket Water
2.2	Temperature Conditioning System for Charge Air Cooling
<b>3.0</b>	<b>Acceptance Testing</b>
<b>4.0</b>	<b>Documentation Requirements</b>
<b>5.0</b>	<b>Warranty</b>

### **Figures**

Figure 1.	Heavy Duty Cell 5 Layout
Figure 2.	Coolant System Concept Drawing

### **Appendices**

Appendix A.	Abbreviation and Terms
Appendix B.	Schedule of Deliverables



## 1.0 Overview and General Requirements

Section 1 of the Statement of Work provides an overview of the scope of the project, and general requirements of the equipment being procured. Specific references, which provide important technical information or guidance, are listed in Section 1.1. Where noted, the requirements of some documents are incorporated by reference as requirements of this Statement of Work. Background information is presented in Section 1.2. A general description of the equipment covered by this Statement of Work, and associated requirements, is presented in Section 1.3. Other general requirements are covered in the balance of Section 1, including requirements for project management.

Contract deliverables and specific requirements are addressed in further detail in subsequent sections of the Statement of Work.

Definitions of acronyms and abbreviations used in this document are provided in the Appendix A.

## 1.1 References

- 1.1.1 Code of Federal Regulations 40 CFR, Subchapter C, Part 86 "Control of Emissions From New and In-Use Highway Vehicles and Engines," Subparts D, N

CFR materials may be found at <http://www.access.gpo.gov/ecfr/>

- 1.1.2 NFPA 70, National Electrical Code ([www.nfpa.org](http://www.nfpa.org))  
All references shall be the most current available as of the date of this contract.

- 1.1.3 EPA Facilities Manual dated February, 1998  
Volume 1 (A/E & Planning Guidelines) and  
Volume 4 (4844 - Facility Safety, Health and Environmental Management Manual)

- 1.1.4 EPA Request for Proposal "Test Cell Controllers and Engine Dynamometers for EPA/NVFEL" (PR-CI-03-10779)

<http://www.epa.gov/oamcinc1/0310779/coverpg.htm>

## 1.2 Background and Procurement Overview

- 1.2.1 As part of the Clean Air Act and its Amendments, a variety of new emissions regulations have been implemented for heavy duty and non-road engines. These regulations and anticipated test programs at the EPA National Vehicle and Fuels Emissions Laboratory (NVFEL) will require test systems that are integrated as sophisticated and adaptable emission measurement systems. The EPA NVFEL has undertaken a comprehensive program to implement new and refined test systems to enhance the capabilities to conduct low level gaseous and particulate emissions testing, of the highest precision and accuracy, on a broad range of engines.

This Statement of Work describes requirements for two coolant conditioning systems to be installed in a new heavy duty engine test cell - HD Cell 5, located in rooms 423 at NVFEL. These systems are

to provide engine jacket water cooling, and conditioned coolant for simulating air to air charge air cooling with a water-air heat exchanger.

- 1.2.2 All general requirements listed in this Statement of Work apply to all equipment purchased under this contract. The Government's minimum requirements are set forth below. In some Statement of Work paragraphs, EPA has provided preferences. These preferences are not the minimum requirement, but are considered more advantageous to the Government.

- 1.2.3 Reserved

- 1.2.4 For the equipment specified, the contractor shall have total system responsibility, which shall include all phases of the project, design/configuration, assembly, integration, quality assurance, delivery to EPA-NVFEL, installation, calibration, commissioning, acceptance testing, documentation and training of EPA staff.

### **1.3 General Description of Test Site**

#### **1.3.1 Heavy Duty Engine Test Cell 5 Site Overview**

This test site is being developed in order to test low-emission heavy-duty engines equipped with advanced exhaust emission control systems, in accordance with regulatory requirements. This capability will also be used to support transient and steady state emissions testing of heavy duty engines that is of a more experimental nature.

The engines that will be tested will typically be those designed for on-highway truck applications, or non-road applications, such as agricultural equipment. The engines tested in this test cell will generally have rated power values from 100 to 400 HP, but engines as small as 75 HP and as large as 600 HP may be tested from time to time. The systems purchased under this contract shall support all Federal and European heavy duty certification procedures and shall be able to support other configurable procedures for research purposes for engines ranging from 75 to 600 HP.

This test site will have a structural mezzanine above the room ceiling panels that is capable of supporting test equipment and dynamometer power drives. The site will house a nominal 600 horsepower AC flux vectored single-ended dynamometer and test cell controller/data acquisition system provided under a separate contract with Schenk Pegasus Corporation. The emissions sampling and analysis equipment will be provided under a separate contract to Horiba Instruments.

- 1.3.2 The test cell shall be considered to be rated a NFPA Class I, Division 2 location for the purposes of equipment design and operation. Minor deviations from NFPA Class I, Division 2 requirements may be allowed due to the level of test ventilation and other safety features of the test site.

### **1.4 Safety, Health, and Environmental Provisions**

- 1.4.1 Providing for a safe working environment is the highest priority in all EPA equipment purchases and installation activity. The contractor shall abide by NEC, OSHA, BOCA, and NFPA codes and the EPA

Facility Safety manual, where applicable, to create a safe system and work environment.

- 1.4.2 Significant risk factors such as noise, ventilation of toxic gases, heated surfaces, electrical shock, and safety interlocks to prevent accidental errors shall be considered, and control measures to ensure the safety of operations and maintenance personnel shall be implemented wherever feasible.
- 1.4.3 To the extent required by OSHA, all equipment shall be designed to provide for straightforward lockout protection in accordance with OSHA regulations. Written lockout instructions, in hard copy and electronic formats, shall be provided as part of the "as installed" documentation package.
- 1.4.4 Noise or vibration from equipment installed as part of this contract shall not penetrate the building or cause adverse affects on other equipment in the facility. Sound dampening/suppression devices and/or materials shall be installed as needed to limit noise levels to 60db at 10 feet from any devices to be located in the control rooms, 70db at 10 feet from any devices to be located in the equipment rooms 75db at 10 feet for devices located in the test cells, except as otherwise noted.
- 1.4.5 The contractor shall consider energy efficiency in all component selection, system design and operational strategies. Energy efficient equipment, such as those with the "Energy Star" designation, shall be utilized when possible.
- 1.4.6 The contractor shall takes steps to minimize the generation of, and release of harmful materials to the environment in all component selection, system design, and operational strategies and installation requirements.
- 1.4.8 The contractor shall provide the NVFEL Project Officer with a complete list of chemicals, if any, to be utilized during installation and commissioning operations at NVFEL, and their associated Material Safety Data Sheets (MSDS), at least two weeks prior to system installation.
- 1.4.9 Installation work shall be performed by appropriately licenced contractors.

## 1.5 **Electrical Requirements**

- 1.5.1 Reserved
- 1.5.2 The EPA will provide the following 3 types of power, as required, at the point of use for the systems delivered under this contract. Final wiring to the equipment is the responsibility of the contractor. Motor loads and other noisy loads will not be allowed on the clean power grid.
  - 208V/120V, 1 phase, 60 Hz, utility grade power
  - 480V/277V, 3 phase, 60 Hz, utility grade power
  - 208V/120V, 1 phase, 60 Hz, clean power
- 1.5.3 All equipment shall be installed in accordance with the 2002 edition of NFPA 70, National Electrical Code and required local codes.

- 1.5.4 Equipment design and installation shall permit operation in compliance with Occupational Safety & Health Administration (OSHA) Standards Part Number 1910. Electrical equipment shall comply with Part 1910 Subpart S.
- 1.5.5 Equipment design and installation shall be in compliance with 2000 edition of NFPA 70E, Standard for Electrical Safety Requirements for Employee Workplaces.
- 1.5.6 Equipment design and installation shall provide energy-isolating devices required for equipment operators to follow the OSHA rule on the Control of Hazardous Energy (Lockout/Tagout) of Title 29 of the Code of Federal Regulations (29 CFR) Part 1910.147.
- 1.5.7 All electrical cables shall be isolated from gas lines.
- 1.5.8 Reserved.
- 1.5.9 All power receptacles shall be heavy duty, industrial grade.
- 1.5.12 All cables external to equipment cabinets with voltages over 50V (AC or DC) shall be run in metal conduit or other EPA approved raceway.
- 1.5.13 Control and signal cables shall be isolated from power cables. All signal cabling shall not be adversely affected due to capacitive or inductive interference.
- 1.5.14 All Control and signal cables/wires shall be permanently labeled with to/from and signal/function name information that corresponds with the provided electrical schematic.
- 1.5.15 All crimp or compression type connections shall use only the component manufacturer's approved crimp tools and shall follow the component manufacturer's termination instructions.
- 1.5.16 Discrete digital input/output (I/O) channels shall be 0 to 5 volt TTL level (unless required to be otherwise) and shall be optically isolated from their source.
- 1.5.17 Analog I/O shall support both  $\pm 5$  VDC and  $\pm 10$  VDC, 4 to 20mA, or pulse train outputs, with appropriate signal conditioning and isolation.
- 1.5.18 The contractor shall provide complete electrical schematics and wire lists in their final documentation package.
- 1.5.19 All electrical installations shall be performed by a licensed electrician.
- 1.6 Project Management and Schedule of Deliverables**
  - 1.6.1 The contractor shall manage the project to ensure on-time completion and efficient interaction with EPA during all project phases. The contractor shall develop a preliminary project plan for review with EPA at a project kick off meeting. The Project Management plan shall indicate the contractor's project manager, contact information, and the project time line.
  - 1.6.2 The project management plan should also include the submissions, milestones and events to be completed no later than the dates

indicated on the Schedule of Deliverables. Alternate dates for intermediate milestones may be proposed at the Project Kickoff meeting as long as the end date of the contract is not affected. All modifications must be approved, in writing, by the EPA Contracting Officer.

- 1.6.3 General system acceptability shall be demonstrated during the off-site acceptance process. Equipment shipment to EPA shall not occur until this requirement is met. The contractor shall have responsibility for preparing a report documenting all quality assurance activities and acceptance results.
- 1.6.4 The contractor shall provide on-site supervision of installation, commissioning and acceptance activities. All contractor personnel shall receive 1-hour briefing by EPA personnel on specific safety and security issues. All contractor personnel and subcontractor personnel must comply with EPA/NVFEL safety and security measures while working at NVFEL.
- 2.0 Technical Requirements for Engine Test Cell Coolant Conditioning Systems**
  - 2.0.1 The engine jacket water and charge air cooling coolant conditioning systems shall be of a proven design currently used in the automotive testing industry. Preference will be given to systems that utilize common, "off the self" components to the maximum extent possible.
  - 2.0.2 The engine jacket water and the charge air coolant system shall be packaged as a separate, independent systems.
  - 2.0.3 Each of the systems shall be designed to optimize control accuracy and response, such as by utilizing a bypass flow circuit with a mixing valve. (See Figure 1.)
  - 2.0.4 Both systems shall be equipped with appropriate and easily accessible drain and service shutoff valves, pressure gages and thermocouples for system monitoring and troubleshooting.
  - 2.0.5 Both systems shall be as compact as possible, and shall nominally be located at floor level at the side walls of the test cell as shown in Figure 1. The maximum cabinet volume of the systems shall be approximately 1m x 1m x 2m (W x D x H). Preference shall be given to systems which use the least floor space.
  - 2.0.6 The coolant conditioning systems shall utilize NVFEL facility process coolant to provide non-contact cooling of engine jacket water and engine charge air coolant.
  - 2.0.7 The facility coolant sides of the heat exchangers shall be compatible with facility process coolant, which consists essentially of municipal "tap" water with minimal anti-corrosion and biological-inhibitor additives. NVFEL process coolant is available in the test cell at 60 to 90 psig at a nominal temperature range of 4 °C to 13 °C, via a 2" inch pipe. Process coolant return is via a 2" inch pipe. The differential pressure from supply to return ranges from 8 to 20 psi.
  - 2.0.8 Both systems shall have their own closed loop control systems. The systems shall be capable of both local and remote set point entry, and local and passthrough control. The system shall interface, and

- be able to be controlled by, the Schenk-Pegasus Stars® data acquisition and control system. At a minimum this shall be via analog signals and digital-logic I/O. Analog I/O shall be 0-5,10 VDC, pulse train or 4-20 mA. Preference will be given to systems that provide both analog and digital-logic I/O, and serial communication, to the Schenk-Pegasus Stars® system via RS 232 A-K protocol.
- 2.0.9 The systems shall have a means, such as a keypad and display, for remote entry of parameters and data display. These remote devices shall be mounted in 19" rack mount cabinet, provided by others, located in the control room. All systems shall retransmit data to the test cell controller via 4-20mA, pulse train or 0-5,10 VDC signals.
- 2.0.10 The system shall provide a logical and straight-forward operator interface. Normal use functions shall be segregated from basic configuration and maintenance functions. Preference will be given to systems that provide for remote communication of all parameters via A-K protocol.
- 2.1 Additional Requirements for the Temperature Conditioning System for Engine Jacket Water**
- 2.1.1 The system shall provide closed loop control of the jacket water temperature. The system shall be primarily to designed for cooling but shall also provide for a nominal 15 kW of heating to allow for rapid engine warm up and maintenance of jacket water temperature at low load conditions. The heating function shall be able to be turned off independently from the rest of the system.
- 2.1.2 The jacket water portion of the system shall utilize an expansion tank, or similar arrangement, with a sight glass or other means of visually confirming engine coolant level. The tank shall be fitted with an overflow/relief vent. The expansion tank shall located such that the engine coolant level is nominally 76" to 80" AFF. Preference will be given to modular systems which utilize a relatively small cooling column which can be place close to the engine with the system heat exchanger located remotely.
- 2.1.3 Reserved
- 2.1.4 The jacket water system shall be designed to operate in both vented and pressurized states. The system shall control maximum engine coolant pressure to an adjustable level between 0 and 25 psig. The system shall contain a separate 25 psig safety relief valve fitted to a drain line. The jacket water system shall function with or without an operational thermostat in the engine.
- 2.1.5 The jacket water system shall include a flow meter with  $\pm 2\%$  accuracy or better on the jacket water inlet side of the system. The meter shall come with a traceable calibration and be installed in such a way as to allow easy access and removal. The delivered system shall include a replacement spool piece, or other means to operate the system without the meter in place. The flow meter shall have a 4-20mA, 0-10 VDC or a pulsed output.
- 2.1.6 The jacket water system shall include a nominal 0-30 psig pressure transducer located in the surge tank for external pressure monitoring. The transducer shall have an accuracy of 1% or better,

with a 4-20mA or 0-10 VDC output.

- 2.1.9 The engine side of the engine coolant loop shall be compatible with either plain water or a 30% to 50% mix of water and glycol (automotive anti-freeze).
- 2.1.10 Reserved
- 2.1.11 Reserved
- 2.1.12 The engines to be tested in this test cell will be in the 75 to 600 HP range and will be both spark ignition and compression ignition. The coolant systems shall be designed for quick response and stable control under both steady state and transient conditions throughout this horsepower range.

The engine jacket water system shall control engine coolant out to the engine to a set point in the 75 °C to 100 °C range. The system shall have a control accuracy of  $\pm 2$  °C from set point. Under steady state conditions, the coolant exiting the system shall be stable not varying by more than 0.3 °C/minute, or 1.0 °C indefinitely under steady conditions, without a functioning engine thermostat installed in the engine

When testing a diesel engine in the nominal 350 HP range, the coolant systems shall achieve critical damped temperature control within  $\pm 2$  °C from set point temperature, within the offeror's stated response time, after a step change from approximately 20% power to full power. This requirement assumes the engine is fully warmed up and operating under normal test cell conditions, without a functioning engine thermostat installed in the engine. Preference will be given to systems with the shortest response times. Once the engine is warmed up, the jacket water coolant system outlet temperature shall not vary by more than  $\pm 5$  °C at any time during transient operation of an engine in the 75 to 600 HP range. This assumes the engine is rejecting sufficient energy to the jacket water to heat it to the set point temperature with no transfer of heat to the facility process coolant.

- 2.1.13 The conditioning system controller shall retransmit the following data to the test cell control computer:

Jacket water temperature from engine, °C, °F (analog outpoint)  
 Jacket water temperature to engine, °C, °F (analog outpoint)  
 Jacket water pressure, kPa (analog outpoint)  
 Jacket water flow, liters/minute (analog or pulse train outpoint)  
 Low coolant level alarm (digital output)

Preference will be given to systems which also retransmit the following data:

Control valve position (analog output)  
 Heater on/off status (digital output)  
 Local/remote set point status (digital output)  
 Passthrough control status (digital output)  
 System function status (digital output)  
 Other parameter as established by the contractor

Preference will be given to systems that transmit these values to the Schenk-Pegasus Stars® system via RS-232 A-K protocol.

## 2.2 Temperature Conditioning System for Charge Air Cooling

2.2.1 The temperature conditioning system shall deliver conditioned water under pressure to an EPA provided charge air cooler. The system shall be useable in either a "closed" configuration where the water delivered to the charge air cooler is always contained and returned under pressure, or an "open" system where the water is sprayed on the exterior surface of an OEM air to air type heat exchanger in a configuration which utilizes a gravity drain. Coolant temperature shall be adjustable to a set point in the range of 20 °C to 40 °C.

2.2.2 The system shall control the charge air coolant temperature to a set point with an accuracy of  $\pm 2$  °C, at sufficient flow to the charge air cooler to provide sufficient cooling for charge air cooling for a highly turbocharged 600 HP engine. The system shall also provide sufficient heating to preheat the charge air coolant to the set point temperature from a starting temperature of 18 °C in approximately 20 minutes, prior to starting a test. For purposes of this specification, it may be assumed that the charge air cooler, and associated connection hoses, will have a coolant fill volume of up to 10 gallons.

When testing a diesel engine in the nominal 350 HP range, the coolant system shall achieve critically damped temperature control within  $\pm 2$  °C from set point temperature, within the offeror's stated response time, after a step change from full power to approximately 20% power. This requirement assumes the engine is fully warmed up and operating under normal test cell conditions. Preference will be given to systems with shorter response times. The charge air coolant system outlet temperature shall not vary by more than  $\pm 3.5$  °C at any time during transient operation of an engine in the 75 to 600 HP range.

2.2.3 In typical testing, the in-use functioning of an OEM charge air cooler will be simulated by setting coolant flow to the charge air cooler to achieve a specified air temperature at the outlet of the charge air cooler, at the rated power of the engine. The coolant flow to the charge air cooler must then remain constant during all subsequent testing. Therefore the system shall provide a means to deliver a controlled, constant, but adjustable coolant flow to the charge air cooler. Once set, coolant flow to the charge air cooler shall not vary by more than 0.5%/minute or 3% total, indefinitely, until flow is purposely readjusted. Coolant flow shall be adjustable from the control room.

The system shall also provide for an alternate mode of operation where coolant flow is controlled remotely to achieve a set air inlet temperature. This shall be via passthrough control from the Schenk-Pegasus Stars® systems.

2.2.4 The charge air coolant system shall include a flow meter with  $\pm 1\%$  accuracy or better on the outlet of the system. The meter shall come with a traceable calibration and be installed in such a way as to allow easy access and removal. The delivered system shall include a second, spare, replacement flow meter. The flow meter shall have a 4-20mA, 0-10 VDC or pulsed output to the Schenk-Pegasus Stars® system to demonstrate and document constant flow. The meter may also be used to control flow.

2.2.5 The inlet and outlet to the charge air heat exchanger shall nominally be 1.5 inch NPTF.



- 2.2.6 The conditioning system shall retransmit the following data to the test cell control computer:

Charge air cooling water temperature to engine, °C, °F (analog output)

Charge air cooling water flow (liters/minute) (analog or pulse train output)

Low coolant level alarm (digital output)

Preference will be given to systems which also retransmit the following data:

Charge air cooling water temperature from engine, °C, °F (analog output)

Charge air cooling water temperature control valve position (analog output)

Charge air cooling water flow control valve position (analog output, if so equipped)

Heater on/off status (digital output)

Local/remote set point status (digital output)

Passthrough control status (digital output)

System function status (digital output)

Other parameters as established by the contractor, depending on the exact method of controlling water flow to charge air cooler and other potential variations

Preference will be given to systems that transmit these values to the Schenk-Pegasus Stars® system via RS-232 A-K protocol.

### 3.0 Acceptance Testing

- 3.0.1 The contractor shall leak check the systems and verify that the systems have been built and operate according the requirements of this Statement of Work, prior to shipment to EPA.

- 3.0.2 All acceptance testing shall be the responsibility of the contractor. The contractor, at the contractor's expense shall rectify all non-compliant conditions. If repairs or changes are made, the contractor shall repeat acceptance testing to demonstrate the acceptable quality of the final product, to the extent necessitated by the scope of the repair or change.

- 3.0.3 At its discretion EPA shall observe the acceptance process. The Project Officer may waive the opportunity to observe the acceptance process.

- 3.0.4 Upon completion of the acceptance testing, the contractor shall delivery a written summary of the results to the EPA Project Officer for shipment approval.

- 3.0.5 The contractor shall reverify correct system operation once the equipment has been delivered, installed and commissioned at EPA. Furthermore EPA will, at a minimum, conduct engine testing to verify that:

(a) Measurement and control response times are equivalent or shorter than those stated in the contractor's proposal.

(b) The range of control, and control accuracy and stability is equivalent or better than that stated in the contractor's

proposal.

- (c) Repeatability is equivalent or better than that stated in the contractor's proposal.

#### **4.0 Documentation Requirements**

- 4.1 The contractor shall provide complete documentation for each system in this contract, including mechanical layout and hydraulic and pneumatic schematics, wire lists, color coding, electrical schematics, piping/tubing diagrams, operating and repair manuals and control system documentation. Documentation shall be in the English language.
- 4.2 For each system a minimum of two (2) sets of each document shall be provided and when available, the contractor shall also provide the documentation in computer readable user modifiable form. Microsoft Word, WordPerfect, AutoCADD, Visio VectorWorks and Microsoft Excel are acceptable file formats as well as any that are compatible with standard translator/conversion tools provided by those applications.
- 4.3 The contractor shall provide a recommended set of detailed calibration, verification and preventative maintenance procedures, schedules, and recommended spare parts inventory.
- 4.4 The contractor shall provide a listing of all system warning and alarm messages, with full explanation as to their exact meaning, impact and action required.
- 4.5 The contractor shall provide a complete "Lock-Out, Tag-out" instruction for equipment requiring energy-isolating devices in accordance with the OSHA rule on the Control of Hazardous Energy (Lockout/Tagout) of Title 29 of the Code of Federal Regulations (29 CFR) Part 1910.147.
- 4.6 The contractor shall supply a list of consumable items with recommended supply sources, as well as a recommended parts list for routine maintenance operations.

#### **5.0 Warranty**

- 5.1 The contractors shall warranty all parts, labor, control systems, and equipment for the performance and functionality of their systems for a minimum of one year after formal EPA system acceptance and approval.
- 5.2 This warranty shall provide for cost-free repair or replacement failed components. This warranty shall not reduce any requirement in this Statement of Work. Contractors shall outline their complete warranty provisions.

#### **6.0 Options**

- 6.1 The following are options that EPA desires to have offered with the base systems. All general requirements shall apply to option features.
- 6.2 The contractor shall offer an option for a jacket water coolant system that allows for operation of an engine that does not have a

- water pump. This system shall provide for adjustable delivery pressure, and measurement and retransmission of coolant inlet pressure.
- 6.3 The contractor shall offer an option for an Extended Service Contract, renewable every year for a period of 4 years from the date of acceptance.
- 6.4 The contractor shall offer an option for up to two additional Engine Jacket Water Cooling Systems meeting all preceding requirements. All offered options shall also be available for these system.
- 6.5 The contractor shall offer an option for up to two additional Charge Air Cooling Systems meeting all preceding requirements.

## **Figures**

Note: These Figures have been consolidated into an Adobe Acrobat PDF  
file named "CoolantSystems.pdf"

Figure 1. Heavy Duty Cell 5 Layout

Figure 2. Coolant System Concept Drawing

## **Appendices**

Appendix A.	Abbreviation and Terms
Appendix B.	Schedule of Deliverables

## Appendix A

### Abbreviations and Terms

ASHRA	- American Society of Heating, Refrigeration, and Air Conditioning Engineers
ASME	- American Society of Mechanical Engineers
BOCA	- Building Officials' Code of America
CFH	- Cubic Feet per Hour
CFM	- Cubic Feet per Minute
CFR	- Code of Federal Regulations
EPA	- Environmental Protection Agency
FM	- Factory Mutual
FTP	- Federal Test Procedure
Hz	- Hertz (per second)
IFC	- InterFace Computer
ISO	- International Standards Organization
LA4	- Los Angeles Driving Cycle #4
LPM	- Liters Per Minute
LNS	- Laboratory Network System
MSDS	- Material Safety Data Sheets
NEC	- National Electrical Codes
NEMA	- National Electrical Manufacturers Association
NFPA	- National Fire Prevention Association
NIST	- National Institute of Standards and Technology
NVFEL	- National Vehicle and Fuels Emissions Laboratory
OSHA	- Occupational Safety and Health Administration
P/N	- Part Number
POC	- Point of Contact
PSIA	- Pounds per Square Inch Absolute
PSIG	- Pounds per Square Inch Gauge
RFP	- Request for Proposal
RTD	- Resistance Temperature Detector
SCFH	- Standard Cubic Feet per Hour
SCFM	- Standard Cubic Feet per Minute
SOW	- Statement of Work
SLPM	- Standard Liters Per Minute
T90	- Time for an instrument to reach 90% of a final steady unit change value
UBC	- Uniform Building Codes
ULEV	- Ultra-Low Emitting Vehicle
VAC	- Voltage w/ Alternating Current
VDC	- Voltage w/ Direct Current
WC	- Water Column

## Appendix B

### Schedule of Deliverables

Dates shown are completion deadlines relative to the contract award date or exercise option date. Where dates are not shown, the contractor shall propose appropriate dates at the Project Kickoff Meeting. All days are calendar days.

- Project Kickoff Meeting and Site Survey (15 days)
- Weekly Status Summary
- Design Submission and Review Meeting (25 days)
- EPA Design Approval
- Submission of Acceptance Plan for Approval
- System Fabrication
- Contractor-Site Acceptance Testing Completed (80 days)
- Submission of Summary Report of Contractor-Site Acceptance Results
- Submission of Installation Material Data Safety Information to EPA for approval
- EPA Authorization to Ship
- EPA-Provided 1-hour Contractor Safety Orientation
- Equipment Delivery to EPA (90 days)
- Equipment Installation Completed
- Equipment Commissioning
- Final Quality Verification Completed
- Training and Submission of all Documentation (120 days)
- Final EPA Approval

ATTACHMENT 3

TECHNICAL EVALUATION CRITERIA



## Technical Evaluation Criteria

### Engine Test Cell Coolant Conditioning Systems for EPA/NVFEL

#### Evaluation - Commercial Items (FAR 52.212-2) (Jan 1999)

- A. The Government will award a contract resulting from this solicitation to the responsible offeror whose proposal conforming to the solicitation will be most advantageous to the Government, price and other factors considered. Evaluation of offers shall include all requirements of the Statement of Work (SOW), including Options. An offer must include the minimum requirements of the SOW, including Options, to be considered for award. The technical criteria set forth below shall be used to evaluate offers. In addition, price will be a consideration.

Offerors shall provide information to demonstrate/substantiate that the proposal meets the minimum requirements set forth below.

#### **Offerors shall:**

1. Demonstrate that the proposal meets all the minimum requirements of the Government and fulfills EPA's needs as set forth and described in the SOW and Technical Proposal Instructions. Offerors shall discuss all aspects of the SOW requirements. In addition proposals shall clearly address how the proposal meets or exceeds requirements in the following critical areas:
  - a. Integration and performance of system to provide an effective and workable system, including ease of use, clarity of display and control functions.
  - b. The accuracy, stability and responsiveness of each system with respect to both controls and measurements.
  - c. Safety and maintainability.
  - d. Packaging for compactness, yet allowing easy access to key components. Physical integration of the systems with all aspects of the existing and proposed facility. (Preferences set forth in Section 2.1.2 of the SOW are considered more advantageous.)
  - e. Integration with the engine test cell controller. Preference will be given to systems which allow for full integration using AK protocol. (Preferences set forth in Sections 2.0.8, 2.0.10, 2.1.13 and 2.2.6 of the SOW are considered more advantageous.)
  - f. Demonstration in the Project Management Plan of how the requirements identified in the SOW will be satisfied to effectively and timely deliver and install required systems.
2. Provide information on previous work that demonstrates experience with fabrication and installation of similar equipment to that described in the Statement of Work. Such information may include drawings, photographs, technical data or papers, catalogs, project management information, etc.
3. Offeror's past performance with requirements of a similar nature with regard to product quality and timeliness of delivery shall be evaluated.

- B. Responses to the above factors shall be evaluated on the following scale:
- |               |  |
|---------------|--|
| Unacceptable: | Does not meet all requirements of the SOW.     |
| Acceptable:   | Meets all minimum requirements of the SOW.     |
| Superior:     | Exceeds the Government's minimum requirements. |
- C. After the responses have been evaluated against the factors above, an order is expected to be placed with the offeror that represents the **Best Value** to the government. Price may not be the determining factor. Best and final offers should be provided. Discussions may be conducted as necessary at the government's discretion after receipt of quotes and proposals.
- D. A written notice of award or acceptance of an offer, mailed or otherwise furnished to the successful offeror within the time for acceptance specified in the offer, shall result in a binding contract without further action by either party. Before the offer's specified expiration time, the Government may accept an offer (or part of an offer), whether or not there are negotiations after its receipt, unless a written notice of withdrawal is received before award.

ATTACHMENT 4

TECHNICAL PROPOSAL INSTRUCTIONS

## **Technical Proposal Instructions**

### **Engine Test Cell Coolant Conditioning Systems for EPA/NVFEL**

#### **General Requirements:**

**Offerors shall submit one original and three (3) copies of its technical proposal.**

In its proposal, offerors shall address all minimum requirements set forth in the Statement of Work (SOW), and also explain any way its proposed solutions would enhance the performance of the delivered Engine Test Cell Coolant Conditioning Systems beyond the minimum requirements. Proposals shall be structured in a manner that clearly and specifically addresses each individual requirement, in the same order and general format in which they are presented in the SOW.

Proposals shall include a list of system electrical requirements, including specific requirements for voltage, amperage, phase and requirements for clean power. Requirements for any equipment loads exceeding 3kW or loads with high inrush current shall be separately identified in the proposal. Offerors shall identify electrical loads greater than 1kW, and with a power factor less than 0.8 in its proposal. Any unusual requirements for electrical power or equipment grounding shall be identified.

Proposals shall include complete warranty provisions and recommended maintenance and calibration intervals.

#### **Specific Requirements:**

1. Proposals shall address all minimum requirements set forth in the SOW, and also explain any way its proposed solutions would enhance the performance of the delivered Engine Test Cell Coolant Conditioning Systems beyond the minimum requirements. Proposals shall be structured in a manner that clearly and specifically addresses each individual requirement, in the same order and general format in which they are presented in the SOW. **Typically, the proposal should include both an affirmative statement and explanation of how the contractor's proposed equipment will meet the requirements. Offerors may use product literature submitted with its proposal to address individual SOW requirements. If using product literature to address individual requirements, offerors should clearly provide where the information can be found in the product literature. In addition offerors shall include the following information in its response to the Technical Evaluation Criteria:**
  - 1a. Offerors shall describe significant ways that the delivered systems will support operational efficiency, including reliability and maintainability in its proposal. This shall include any significant ergonomic considerations with respect to physical design and layout and clarity and ease of use of operator interface with automated systems. Offerors shall describe any additional devices, displays, or controls that enhance the setup, operation, quality, safety, and efficiency of the system and can be integrated with the delivered system.
  - 1b. Offers shall indicate the accuracy, stability and responsiveness of the temperature and flow control systems, including the step change responsiveness of temperature control, as set forth in the SOW.
  - 1c. Offerors shall include a summary of the safety aspects of the

proposed system.

- 1d. Offerors shall include drawings, schematics and or photos which illustrate the size, typical location, maintenance access and connection points of the proposed system.

Offers shall describe any measures taken to minimize the energy requirements of the system. Describe and illustrate any special mounting provisions or any associated requirements not provided by the offeror. Describe any other significant, proposed physical modifications to the test site or facility. Preference will be given to systems which do not require significant modification to the EPA/NVFEL building or facility systems.

- 1e. Offerors shall provide a complete description of external data I/O and integration with the test cell host computer, in its proposal. The offeror shall detail its proposed computer system interface design and protocols, including the availability of a RS-232 AK protocol, and describe the ease with each the provided measurement system can be expected to interface with and be controlled by the test cell controllers identified in the SOW.

- 1f. Proposals shall include a Project Management Plan. The Project Management Plan shall include project schedule information and affirmative statements regarding the offerors ability to meet delivery requirements. An explanation of the management of the project, including a Gantt chart showing major milestones should be submitted.

- 2. In its proposal, offerors shall provide evidence that its fuel measurement and conditioning systems have general acceptance in laboratories performing functions closely associated with engine emissions testing functions described in the SOW. Offerors should list at least three different test laboratories using similar systems for fuel flow measurement and conditioning. This listing shall include a brief description of each system. In lieu of a contract listing, or in addition to the contract listing, offerors should provide information such as drawings, photographs, technical data or papers, catalogs, project management information to establish general acceptance.
- 3. Submit a list of contracts and subcontracts completed which are similar in nature to this requirement. The contracts and subcontracts listed may include those entered into with Federal, State and Local governments, and commercial businesses, which are of similar scope, magnitude, relevance, and complexity to the requirement which is described in the RFP. Provide for each cited contract and/or subcontract the name of the client, address, phone number, e-mail address if applicable, and the period of performance.